CHAPTER 3 – AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Introduction

This chapter summarizes the physical, biological, social and economic environments that would be affected by the proposed action and alternatives and the effects on that environment that would result from implementation of any of the alternatives. This chapter also presents the scientific and analytical basis for comparison of the alternatives presented in Chapter 2, Alternatives.

The affected environment section under each resource topic describes the existing or baseline, condition against which environmental effects were evaluated and from which progress toward the desired condition can be measured. Environmental consequences form the scientific and analytical basis for comparison of alternatives, including the proposed action, through compliance with standards set forth in the 1991 Sierra National Forest Land and Resource Management Plan (LRMP) and a summary of monitoring required by the National Environmental Policy Act of 1969 (NEPA) and National Forest Management Act of 1976 (see Appendix B). The environmental consequences discussion centers on direct, indirect and cumulative effects, along with applicable mitigation measures. Effects can be neutral, beneficial or adverse. The "irreversible and irretrievable commitments of resources" section is located at the end of this chapter. These terms are defined as follows:

- **Direct effects** are caused by the action and occur at the same place and time as the action.
- **Indirect effects** are caused by the action and are later in time or further removed in distance, but are still reasonably foreseeable.
- **Cumulative effects** are those that result from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions.

Analysis Process

The environmental consequences presented in Chapter 3 address the impacts of the actions proposed under each alternative for the Sierra National Forest (SNF). This effects analysis was done at the forest scale (the scale of the proposed action as discussed in Ch.1). However, the effects findings in this chapter are based on site specific analyses of each road, trail and area proposed for addition to the National Forest Transportation System (NFTS) and any changes in vehicle class and/or season of use for existing NFTS roads, trails and areas. Each affected road, trail and area proposed in the alternatives has been reviewed by resource specialists and their findings documented in Appendix A (summary) and the project record. Readers seeking more detailed information concerning the environmental effects associated with a specific road, trail or area are directed to Appendix A and the project record, where details of field data observations are documented.

For ease of documentation and understanding, the effects of the alternatives are described separately for three discreet actions and then summarized under cumulative effects (see below). The combination of these discreet actions is then added to the past, present and reasonably foreseeable actions in the cumulative effects analysis. The four discreet actions common to all action alternatives are:

1. **Prohibition of cross-country motor vehicle travel.** The direct and indirect effects of this action are described generally in each alternative, considering both current conditions and

projected trends. Both short (1 year) and long-term (approximately 20 years) effects are presented.

2. **Addition of new facilities (roads, trails and/or areas) to the National Forest Transportation System (NFTS).** As described above, the impacts of new facilities are addressed in sum total in this chapter while impacts of individual routes or areas are addressed in Appendix B. For most resources, one or more resource indicators are used to measure the direct and indirect effects of each alternative. Both short (1 year) and long-term (approximately 20 years with the exception of Cumulative Watershed Effects [CWE] which are approximately 30 years) impacts are presented.

3. **Changes to vehicle class and season of use on the existing NFTS**. Impacts caused by changes to vehicle class and season of use on the existing NFTS are described generally by alternative. For some impacts (for example public safety), impacts are also addressed by route. Where impacts associated with individual routes are warranted, the reader is directed to appendices or project files where this data is located.

4. **Non-significant Forest Plan Amendment:** Proposal for a non-significant Forest Plan (LRMP) amendment to allow some of the proposed route additions to the NFTS to be designated within the Recreation Opportunity Spectrum (ROS) class Semi-Primitive, Non-Motorized area as defined in the LRMP.

Cumulative Effects

According to the Council on Environmental Quality (CEQ) NEPA regulations, a "cumulative impact" is the impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions (40 CFR 1508.7).

The cumulative effects analysis area is described under each resource, but in most cases includes the entire Sierra National Forest including private and other public lands that lie within the SNF boundary. Past activities are considered part of the existing condition and are discussed in the "Affected Environment (Existing Conditions)" and "Environmental Consequences" section under each resource.

In order to understand the contribution of past actions to the cumulative effects of the proposed action and alternatives, this analysis relies on current environmental conditions as a proxy for the impacts of past actions. This is because existing conditions reflect the aggregate impact of all prior human actions and natural events that have affected the environment and might contribute to cumulative effects.

This cumulative effects analysis does not attempt to quantify the effects of past human actions by adding up all prior actions on an action-by-action basis. There are several reasons for not taking this approach. First, a catalog and analysis of all past actions would be impractical to compile and unduly costly to obtain. Current conditions have been impacted by innumerable actions over the last century (and beyond) and trying to isolate the individual actions that continue to have residual impacts would be nearly impossible. Second, providing the details of past actions on an individual basis would not be useful to predict the cumulative effects of the proposed action or alternatives. In fact, focusing on individual actions would be less accurate than looking at existing conditions, because there is limited information on the environmental impacts of individual past actions and one can not reasonably identify each and every action over the last century that has contributed to current conditions. Additionally, focusing on the impacts of past human actions risks ignoring the important residual effects of past natural events, which may contribute to cumulative effects just as much as human actions. By looking at current conditions, we are sure to capture all the residual effects of past human actions and natural events, regardless of which

particular action or event contributed those effects. Third, public scoping for this project did not identify any public interest or need for detailed information on individual past actions. Finally, the Council on Environmental Quality issued an interpretive memorandum on June 24, 2005 regarding analysis of past actions, which states, "agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions." For these reasons, the analysis of past actions in this section is based on current environmental conditions.

Appendix E lists present and reasonably foreseeable future actions potentially contributing to cumulative effects.

Affected Environment Overview

There are many aspects of the affected environment that are shared by all resources. In order to avoid repeating these shared elements of the affected environment in each resource section the following general elements of the affected environment are provided.

Unmanaged motor vehicle use has resulted in unplanned roads and trails, erosion, watershed and habitat degradation and impacts to cultural resource sites. On some Sierra National Forest System lands, long managed as open to cross-country motor vehicle travel, repeated use has resulted in unplanned, unauthorized, roads and trails. These routes generally developed without environmental analysis or public involvement and do not have the same status as NFTS roads and NFTS trails included in the forest transportation system.

Analysis Units Description

The Sierra National Forest spans 1.3 million acres and contains several vegetation communities and ecosystems. Located in the central portion of the Sierra Nevada, the forest starts near the Central Valley and rises to the top of the Sierra Crest, where the boundary is shared with the Inyo National Forest and Kings Canyon National Park. The northern border of the forest is composed of the South Fork of the Merced River and Yosemite National Park. The southern border is marked by the Kings River and Sequoia National Forest and Monument.

Analysis units were devised to divide the project area by geographic and transportation boundaries that would be easily understood by the public on a map. There are approximately 850,000 acres encompassed within these analysis units. The following is a summary of analysis units:

SOUTH FORK ANALYSIS UNIT (SFM) 70,495 ACRES

Located on the Bass Lake Ranger District, this unit is bordered by the Merced Wild and Scenic River to the north and bisected by the South Fork of the Merced Wild and Scenic River. Vegetation includes (chamise and manzanita) chaparral, live oak woodland, blue oak/ gray pine woodland, ponderosa pine forest and mixed-conifer forest. The Chowchilla area includes the Devil's Peak Botanical Area, Ferguson Ridge Roadless Area and Devil's Gulch Roadless Area. Most of the area is not easily accessible by foot or vehicle.

WESTFALL ANALYSIS UNIT (WES) 85,522 ACRES

This unit is a section of the Bass Lake District that is bordered by Yosemite National Park to the north, Miami Mountain to the west and Bass Lake to the south. This area spans several vegetation types from chaparral (both chamise and ceanothus/manzanita), blue oak woodlands, ponderosa pine forest, mixed conifer forest and some small amounts of white fir/ red fir forest. Adjacent to private lands and Yosemite National Park, this location makes it popular for recreation activities. Chowchilla River, Big Creek and Miami Creek run through this analysis unit.

GLOBE ANALYSIS UNIT (GLO) 91,184 ACRES

Located in the north section of the Bass Lake District, the Globe analysis unit borders Yosemite National Park to its north, the Ansel Adams Wilderness to the east, some of the Sierra Vista Scenic Byway to the south and State Highway 41 to the west. Almost the entire area is located above 4000 ft in elevation and consists mostly of white fir/ red fir forest, with some mixed conifer forest, montane chaparral and lodgepole forests. There are some natural lakes, many wet meadows and notable creeks include Big Creek and portions of Chiquito Creek. Nelder Grove holds the largest concentration of giant sequoias on the Sierra National Forest. The far eastern portion of the area is used as a starting point for backcountry trips, while much of the area is used for camping and hiking. There are several private inholdings dispersed throughout this area. This area contains significant granitic outcrops, especially around the Bowler campground area. Mt. Raymond Inventoried Roadless Area is within the analysis unit.

GAGGS ANALYSIS UNIT (GAG) 87,163 ACRES

Gaggs comprises the center portion of the Bass Lake District areas, with Bass Lake on the west end, the Sierra Vista Scenic Byway to the south and north and roads 6S71/6S01 to the east. The area is dominated by Shuteye and Little Shuteye Peak, with Whiskey Ridge and the South Fork Bluffs being notable as well. Elevations range from about 2000 ft to 8357 ft at Shuteye Peak. A range of vegetation types are found here, from blue oak/ gray pine woodland, whiteleaf manzanita/ ceanothus chaparral, ponderosa pine forest, mixed-conifer forest, white fir/ red fir forests, as well as stands of lodgepole forest. Numerous meadows, both wet and dry, are found through the area; some of the larger riparian features are Willow, Rock, Whiskey and Chiquito Creeks. Granitic ridges are the dominant morphological feature of the unit.

MAMMOTH ANALYSIS UNIT (MAM) 54,120 ACRES

This unit is a relatively narrow area on the Bass Lake District that has Mammoth Pool Reservoir on its eastern edge and Sierra Vista Scenic Byway as the western boundary. Going north until the Ansel Adams Wilderness area, it is primarily composed of steep granitic outcrops that plunge into the San Joaquin River. Vegetation consists of chaparral (in lower and higher elevations), ponderosa pine forest, mixed-conifer forest and some red-fir and lodgepole forest to the north. There are several creeks that cross the area enroute to the San Joaquin River. There are some notable granitic formations, such as Balloon Dome and Fuller Buttes.

STUMP SPRINGS-BIG CREEK ANALYSIS UNIT (SSB) 85,392 ACRES

Located on the High Sierra District, this unit circles around the Kaiser Wilderness from Big Creek to the south and reaches around to the north side of the Kaiser Wilderness. Some notable features include Mt. Tom, Huntington Lake and Mushroom Rock. The San Joaquin River (including Mammoth Pool Reservoir) forms the main boundary to the west and the Middle Fork San Joaquin is the northern boundary. Much of the area is steep near the rivers but the northern portion is somewhat flat and is primarily a mixed-conifer forest with some red-fir and lodgepole forest pockets. Also has large extent of montane chaparral, especially near the Big Creek area.

EAST OF KAISER PASS ANALYSIS UNIT (EKP) 13,123 ACRES

This unit is an area on the High Sierra District starting with Kaiser Pass on the south end and encompasses the non-wilderness areas between the John Muir and Kaiser Wildernesses. Primarily red-fir forest and lodgepole, there are some relatively lower portions containing mixed conifer forest while some small areas have subalpine forest with western juniper, mountain hemlock, whitebark pine and western white pine. This analysis unit is dominated by granitic outcrops and contains Florence Lake and Lake Thomas Edison, as well as some portions of the South Fork of the San Joaquin.

JOSE-CHAWANAKEE ANALYSIS UNIT (JCH) 46,655 ACRES

Bordered by the San Joaquin River to the north, this unit is on the High Sierra District and is characterized by blue oak/ gray pine woodland, type-converted annual grasslands, chaparral, cismontane forest, ponderosa pine forest and mixed conifer forest. Jose Basin is included in this unit. There are some riparian areas and steep granitic areas that drop into the San Joaquin River gorge.

TAMARACK-DINKEY ANALYSIS UNIT (TAD) 143,508 ACRES

A higher elevation unit (5500-10000 ft) on the High Sierra District, the Tamarack-Dinkey analysis unit consists of mixed-conifer forest, red-fir forest, mountain whitethorn chaparral, lodgepole forest and some subalpine meadow and shrub habitat. There is one stand of giant sequoia contained within this unit (McKinley Grove), as well as several wet meadows and fens, lakes and riparian areas. There are some prominent granitic areas, especially near Courtright and Wishon Reservoirs. Some of the larger creeks include Dinkey Creek, Deer Creek, Tamarack Creek and portions of Big Creek. Dinkey Lakes Inventoried Roadless Area is contained within this analysis unit.

DINKEY-KINGS ANALYSIS UNIT (DNK) 180,503 ACRES

This area on the High Sierra District extends northward from the Kings River up to Dinkey Creek/ McKinley Grove Road. Elevation ranges from about 1500 to 6000 ft. This area is composed of blue oak/ gray pine woodlands, whiteleaf manzanita/ceanothus chaparral, ponderosa pine forest, mixed-conifer forest and some red-fir forest. It has several granitic areas composed of open domes and large rock formations, limestone outcrops, riparian areas, wet meadows and fens. The Kings River forms the southern boundary of the analysis unit and is a major watershed for the SNF; there are several tributaries for the Kings River in this analysis unit. Sycamore Springs and Rancheria Inventoried Roadless Areas are found within this analysis unit.

Resource Reports

Each section in this chapter provides a summary of the project-specific reports, assessments and input prepared by Forest Service specialists, which are incorporated by reference in this Draft Environmental Impact Statement (DEIS). The following reports and memoranda are incorporated by reference: Transportation, Recreation, Socio Economic, Cultural, Botanical, Noxious Weeds, Soils, Wildlife (Terrestrial and Aquatic), Water, Air and Visual Resource Reports, Botanical Biological Evaluation, Noxious Weed Risk Assessment; and Biological Assessment / Biological Evaluation (BA/BE) for the U.S. Fish and Wildlife Service (USFWS). These reports or memoranda are part of the project record on file at the High Sierra Ranger District, Sierra National Forest in Prather, California. Copies of these reports are available upon request by contacting Gayne Sears, Project Leader, at (559) 877-2218 extension 3182.

Site Specific Data (Route Cards)

During the planning stages of the travel management project for the SNF, members of the public recommended changes to the existing NFTS with a focus on unauthorized routes. Comments regarding specific routes were also received during the public scoping period for the NOI. The disposition of these routes fell into two categories: routes brought forward for detailed study in alternative(s) and routes eliminated from detailed study. These decisions were made by the responsible official based upon the purpose and need, the scope of the EIS and issues raised by the public and the interdisciplinary team. Site specific data (route cards) was gathered for all routes considered in alternative(s). These route cards are located in Appendix A and display specific data for proposed additions and changes to the NFTS.

A number of the recommended routes are proposed to be added to the NFTS under one or more of the action alternatives. For these routes, the route card identifies the alternative(s) under which the route is proposed, the type of vehicles allowed, the season when the route would be open as well as any required mitigation measures that would be implemented on the route prior to publication on a MVUM and allowing public use. Regular operation and maintenance activities (e.g. brushing, signing, cleaning and maintaining existing drainage structures, patrolling routes, etc.) are a part of regular maintenance and management strategies for the NFTS and covered under a separate NEPA analysis.

Law Enforcement

Law enforcement authority and jurisdiction, cooperation, implementation and tracking, implementation strategy, assumptions and measures of success are discussed in details in Appendix D.

Enforcement Assumptions

1. Enforcement of the laws and regulations related to Travel Management will be enforced equally in authority and weight as with all other Federal laws and regulations.
2. As with any change in a regulation on NFS lands, there is usually a transitional period for the public to understand the changes. It is anticipated there will be a higher number of violations to the Travel Management Rule the first few years and the number of violations will decline as the users understand and comply with the rules. It is assumed :
    a. Users in communities adjacent to the Forest will comply within 1 to 2 years.
    b. Frequent users but further in distant from the Forest will comply within 2 to 3 years.
    c. Infrequent users regardless of distant may take up to 5 years to comply.
3. Law enforcement officer and Agency personnel presence and enforcement actions will positively affect motor vehicle users' behaviors and attitudes.
4. The Travel Management Rule and associated motor vehicle use map (MVUM) clearly define the designated routes; therefore, making violations to the rule unequivocal.
5. Once the motor vehicle use map (MVUM) is published, the implementation of the designated system of roads, trails and areas with signs and user education programs, will reduce the number of violations.
6. Fire prevention officers (FPOs) spend a large percentage of their time on travel management issues and depending on the National Forest, the estimate ranges from 30 to 50 percent. Law enforcement officers LEOs spend approximately 10 to 20 percent of their time on enforcement of motor vehicle issues.
7. The proposal to provide additional facilities to the NFTS through some action alternatives is anticipated to assist enforcing the shift from an "open to cross-country motor vehicle travel" management situation to one where such use is prohibited. These actions provide opportunities and access where such use was occurring in key popular dispersed locations based upon recreation analysis and public input. Providing opportunities in popular, key areas will help relieve pressure to travel off of designated routes.

Analysis Framework: Statute, Regulation, Forest Plan (LRMP) and Other Direction

NEPA at 40 CFR 1502.25(a) directs "to the fullest extent possible, agencies shall prepare draft environmental impact statements concurrently with and integrated with …other environmental review laws and executive orders." Each resource section includes a list of applicable laws, regulations, policies and Executive Orders that are relevant to that resource. Surveys, analyses and findings required by those laws are addressed in those sections.

National Forest Management Act (NFMA)

National Forest Management Act (NFMA). Specifically for Off-Highway Vehicle management, NFMA requires that this use be planned and implemented to protect land and other resources, promote public safety and minimize conflicts with other uses of the NFS lands. NFMA also requires that a broad spectrum of forest and rangeland-related outdoor recreation opportunities be provided that respond to current and anticipated user demands.

The Forest Service is complying with the provisions of this law.

2005 Travel Management Rule (36 CFR 212, 251, 261 and 295)

Travel Management Rule, Subpart B (36 CFR 212) is the implementing regulation for the Forest Road Transportation Atlas (FRTA) and includes portions of the Travel Management Rule published in the Federal Register on November 9, 2005. Part 212 provides criteria for designation of roads, trails and areas. Providing safe transportation facilities and considering the affordability of maintaining the transportation facilities are two of the criteria. The Travel Management Rule also requires that in designating NFTS roads, trails and areas, responsible officials consider the provision of recreational opportunities; public access needs; conflicts among uses of NFS lands, including other recreational uses; and the compatibility of motor vehicle use with existing conditions in populated areas.

Criteria that incorporated Executive Orders 11644 and 11989:

1. The responsible official shall consider the effects of designated roads, trails and areas on the provision of recreational opportunities, access needs and conflicts among uses of National Forest System lands. 36 CFR 212.55 (a)
2. The responsible official shall consider effects on the following, with the objective of minimizing: Conflicts between motor vehicle use and existing or proposed recreational uses of National Forest System lands or neighboring Federal lands; Conflicts among different classes of motor vehicle uses of National Forest System lands or neighboring Federal lands; and the compatibility of motor vehicle uses with existing conditions in populated areas, taking into account sound, emissions and other factors. 36 CFR 212.55 (b).

The Forest Service is complying with the provisions of this law.

Forest Service Manual Sections 2350 and 7700

Forest Service Manual Sections 2350 and 7700 contain Agency policy for management of the NFTS. The policy requires the development of trail management objectives (TMO) and road management objectives (RMO). The TMOs and RMOs document the purpose of each trail or road. The purpose for the trail or road sets the parameters for maintenance standards needed to meet user needs, resource protection and public safety. Forest Service Handbook 7709.58 describes the maintenance management system the Forest Service uses and the maintenance

standards needed to meet road management objectives (RMOs) for the road system and include considerations for public safety. Forest Service Handbook 2309.18 describes the technical guidelines for the survey, design, construction, maintenance and assessment to meet TMOs for the trail system and include considerations for public safety.

Sierra National Forest Plan (LRMP) Direction

The LRMP provides goals for the transportation and facility resource and requires a broad range of developed and dispersed recreation opportunities in balance with existing and future demand (USDA-FS 1991).

There are three levels of direction in the SNF LRMP. The first level of direction is the Forest Goals and Objectives (Section 4.2). Goals and objectives provide broad, overall direction for type and amount of goods and services the Forest will provide in the future. The second level is a discussion of Future Conditions of the Forest (Section 4.3). The third level is general Management Prescriptions (Section 4.4) and Management Standards and Guidelines (Section 4.5).

The LRMP provides goals for the recreation resource and requires a broad range of developed and dispersed recreation opportunities in balance with existing and future demand. For management and conceptual convenience possible mixes or combinations of activities, settings and probable experience opportunities have been arranged along a spectrum or continuum. This continuum is called the Recreation Opportunity Spectrum (ROS) and planning for recreation opportunities using the ROS is conducted as part of LRMP. The ROS provides a framework for defining the types of outdoor recreation the public might desire and identifies that portion of the spectrum a given National Forest might be able to provide. ROS is divided into six classes: Primitive, Semi-Primitive Non-Motorized, Semi-Primitive Motorized, Roaded Natural, Rural and Urban. Each class is defined in terms of its combination of activity, setting and experience opportunities (ROS Users Guide, USDA-FS 1986). The intent is to use ROS and its associated settings to provide recreation input into LRMP which in turn may be incorporated into LRMP management prescriptions or used in project level planning beyond the programmatic planning used to develop the LRMP.

These efforts provide for these recreation opportunities to meet NFMA requirements for a broad spectrum of forest and rangeland-related outdoor recreation opportunities that respond to current and anticipated user demands. As noted above, NFMA requires that off-highway vehicle opportunities be planned and implemented to protect land and other resources, promote public safety and minimize conflicts with other uses of the NFS lands. For the purposes of travel management actions, the terminology ‘off-highway vehicle’ is applied to public wheeled motor vehicle use (highway legal and non-highway legal). How ROS applies to the LRMP depends on how (or if) it was integrated into the management prescriptions and associated standards and guides in the forest LRMP.

LRMP Standards and Guidelines

Management Standards and Guidelines more specifically describe how SNF Goals and Objectives will be achieved and set minimum conditions that must be maintained while achieving the goals and objectives adhering to policies. The management and resource guidance in the SNF LRMP that relates to roads, trails and motorized use areas is listed below.

LRMP Goals and Objectives #1	Provide a broad spectrum of dispersed and developed recreation opportunities in accord with identified needs and demands and meet Recreation Opportunity Spectrum (ROS) Class objective shown on the ROS element maps

LRMP Goals and Objectives #3	Manage most visually sensitive areas in the SNF by placing major roads, trails, streams and areas of concentrated visitor use in scenic corridors and managed viewsheds.
Future Conditions 4.3.4 Recreation	... Some additional OHV routes and areas will be designated where cross-country travel was previously allowed. Forest Plan implementation will also include development of a new Forest ORV Plan which will designate an OHV route system and contain management direction from the Forest Plan. ... This new plan replaces the 1977 ORV Plan.
4.4 Management Prescriptions	Management prescriptions are sets of overall direction for managing individual land units.
4.4.4 Limited-Timber Yield (Class III)	OHV use...are permitted when emphasized resource values such as visual, soils and wildlife can be protected.
4.4.5 Modified-Timber Yield (Class II)	Recreation opportunities are primarily for dispersed activities in a roaded natural setting. OHV use is permitted on designated routes or areas.
4.4.6 Full-Timber Yield (Class I)	Dispersed recreational opportunities exist in a roaded natural setting. OHV use is permitted on designated routes or areas.
4.4.7 Developed Recreation (pg 4-10)	Rural and roaded natural recreational opportunities are stressed. OHV use is prohibited, except for ingress and egress.
4.4.8 Administrative Sites	OHVs are restricted to roads.
4.4.10 Special Management Area (Kings River)	OHV use is restricted to designated roads and trails.
4.4.11 Experimental Forest	OHV use is prohibited
4.4.15 Dispersed Recreation	This prescription emphasizes dispersed recreational opportunities, primarily in semi-primitive, roaded natural and rural recreational opportunity-class settings. …Road construction is held to a minimum with most roads closed to retain dispersed recreational opportunities in a semi-primitive non-motorized or motorized setting,. OHV use of access routes in most of these areas is generally allowed to continue. Semi-primitive non-motorized areas are closed to OHV use.
4.5 Standards and Guidelines (S&G)	These management standards and guidelines supplement National and regional standards, guidelines and direction and also complete the management prescriptions for the management areas.
4.5.2.1 Recreation Standards and Guidelines (S&G) #14	Provide increase in road and trail construction to facilitate opportunities for dispersed use.
4.5.2.1 Recreation (S&G) #15	Provide opportunities for increasing dispersed recreation about 15 percent by 2000.
4.5.2.1 Recreation (S&G) #16	Rehabilitate facilities in dispersed recreational areas for visitor comfort and site protection by 2005.
4.5.2.1 Recreation (S&G)	Except for over-snow vehicles, allow no cross-country OHV

#17	travel. Designate additional OHV routes in areas where cross-country travel was previously allowed. Open all Maintenance Level 1 and 2 roads for OHV use unless designated as a combined use road. Designate those trails where motor bike use will be allowed. Restrict snowmobile use to designated routes in snow-play areas, along major highways, within major developed recreation areas and in popular cross-country ski areas.
4.5.2.1 Recreation (S&G) #18	Provide protection and retainment of trails and OHV routes when land-disturbing activities are planned
4.5.2.1 Recreation (S&G) #20	Limit recreational events involving motor vehicles to established or approved routes. Approved other types of events on a case-by-case basis, all to be authorized by special use permit
4.5.2.1 Recreation (S&G) #22	Maintain acreages in each ROS class to meet objective shown on ROS Element map.
4.5.2.1 Recreation (S&G) #24	Cooperate with State, other agencies and user groups to identify and where compatible with Forest Plan management objectives, develop segments of trail that support the concept of a statewide trail system connecting use areas and providing opportunity for long distance trail touring.
4.5.2.4 Wild and Scenic Rivers (S&G) #31	Managed designated river corridors according to classification and direction established in the Wild and Scenic River Management Plan.
4.5.2.5 Fish, Wildlife and Sensitive Plants (S&G) #39	Establish a 200-foot zone on each side of all reaches of the tributaries to Portuguese Creek and Cow Creek where Lahontan cutthroat trout currently occur on all Class I, II and III tributaries above those reaches. Apply the following standards within this zone: … c. No motor vehicles will be allowed off permanent roads except as authorized by permit or contract …
4.5.2.5 Fish, Wildlife and Sensitive Plants (S&G) #62	For connectivity, manage a minimum of 600 foot wide travelways, identified and mapped as part of the planning record, to provide linkage between marten and fisher habitat management areas. Continue existing Forest uses in and adjacent to travel ways. Allow new management activities in travelways when they will not directly or indirectly preclude use by marten and fisher as determined by a biological evaluation.
4.5.2.5 Fish, Wildlife and Sensitive Plants (S&G) #77	Protect streamside zones by locating new roads outside of riparian areas, except at stream crossings.
4.5.2.5 Fish, Wildlife and Sensitive Plants (S&G) #78	Avoid constructing new roads within the perimeter of meadows and other riparian areas where opportunities exist to relocate or obliterate existing roads.
4.5.2.7 Range (S&G) #91	Maintain stock driveways and travelways in usable conditions.
4.5.2.8 Soil and Water (S&G) #129	Road construction on areas with High and Very High Erosion Hazard will follow standards in FSH 2509.22, Sierra Supplement Number 1 which gives direction concerning soil stabilization and

	road surface drainage. …
4.5.2.16 Transportation and Facilities (S&G) #206	Improve arterial and collector road system to emphasize economic efficiency, user safety and protection of adjacent resources
4.5.2.16 Transportation and Facilities (S&G) #209	All system roads are assigned to one of five maintenance levels and will be maintained and operated in accord with established road management objectives, signed by the District Ranger, on file at the District and Supervisor's office.
4.5.2.16 Transportation and Facilities (S&G) #210	Controlled use of the road system including road closures, may be triggered by: a. Wildlife protection b. Snow or adverse weather c. Hazardous fire conditions d. Need for a full range of recreational facilities e. Protection of private interests f. Mining claim access g. Protection of sensitive resources
4.5.2.16 Transportation and Facilities (S&G) #213	The arterial road system will be developed to an all-weather standard.
4.5.11 Applicable to All Developed Recreation Analysis Area 55 (Courtright/Wishon Reservoirs) (S&G) #294	Maintain primitive and semi-primitive motorized and non-motorized recreation by closing roads to general two-wheel traffic upon project activity completion.
4.5.13 Applicable to All Dispersed Recreation Analysis Areas in Management Areas 2 and 11 (S&G) #303	Maintain semi-primitive recreation opportunities where they now occur by closing roads, except designated OHV routes, immediately following project activities
4.5.13 Applicable to All Dispersed Recreation Analysis Areas in Management Areas 2 and 11 (S&G) #304	Where possible, increase the acreage of primitive and semi-primitive recreation by closing unneeded local roads.
4.5.13 Applicable to All Dispersed Recreation Analysis Areas in Management Areas 2 and 11 (S&G) #306	Designate four-wheel drive and trail-bike route termini at popular lake and stream locations. These termini will normally be a minimum of 300 feet to a maximum of ¼ mile from the attraction and will have parking facilities with vehicle controls.
4.5.15 Applicable to All Timber Analysis Areas in Management Area 4 (S&G)	Close unneeded local roads to public use. Consider these roads for possible designation as OHV routes prior to closure.

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4.5.16 Applicable for Analysis Areas 22 and 49 in Management Area 4 (S&G) #317	Establishes a 200-foot zone on each side of all reaches of tributaries to Portuguese and Cow Creeks where Lahontan cutthroat trout currently occur (January 1, 1989) on all Class I, II and III tributaries above those reaches. Apply the following standards within this zone: c. No motor vehicles will be allowed off permanent roads, except as authorized by permit or contract.
4.5.21 Applicable for Analysis Area 61 in Management Area 9 (S&G) #324	Close roads not necessary for administrative purposes in the area south of Rancheria Creek to maintain integrity of the Spanish Lakes OHV route.
4.5.23 Applicable to All Front Country Analysis Areas in Management Area 5 (S&G) #326	Close unneeded roads to motorized use to establish more area for hiking, horseback riding, four-wheel drive, trailbike use and other forms of recreation not normally associated with areas easily accessed by two-wheel drive.

Additional Direction

In addition to the Forest Plan (LRMP) there are several other sources of direction that are important to this analysis:

Sierra National Forest 1977 Off-Road Vehicle Plan

The 1977 ORV Plan developed management by three areas: open use, limited use and non-use (USDA-FS 1977). Open use was defined as area and trails which are suitable for ORV use, restricted only by operating conditions set forth in the Code of Federal Regulations. Limited use was defined as areas and trails which are suitable for ORV use under specified controls. Non-use was defined as areas and trail which are not suitable for ORV use because of adverse impacts or legislative constraints.

Sierra Nevada Forest Plan Amendment (SNFPA)

The forestwide management standards and guidelines (S&G) in the Record of Decision (ROD) (USDA-FS 2004a: pp.62 – 66) for the 2004 Sierra Nevada Forest Plan Amendment applicable to motorized travel management established the direction to prohibit motor vehicle travel off of designated routes, trails and limited off-highway vehicle (OHV) use areas. Unless otherwise restricted by current forest plans or other specific area standards and guidelines, cross-country travel by over-snow vehicles would continue.

California Wilderness Act (1984)

The 1984 California Wilderness Act established the Dusy Ershim OHV route adjacent to the John Muir Wilderness.

Regional Forester Direction

Regional Forester's letters file code 7700/2350, dated 08/26/06, 06/20/07 and 01/13/09 contain procedures National Forests in the Pacific Southwest Region will use to evaluate safety aspects of public travel on roads when proposed changes to the NFTS will allow both highway legal and non-highway legal traffic on a road (motorized mixed use).

State of California Vehicle Code Regulation

California Vehicle Code (CVC) regulates the use of motor vehicles in California, including motor vehicles used on the National Forests. The CVC sets safety standards for motor vehicles and vehicle operators. It defines the safety equipment needed for highway legal and non-highway legal vehicles. It also defines the roads and trails where non-highway legal motor vehicles may be operated.

Information on Other Resource Areas

The proposed action and alternatives do not propose actions affecting the resource areas below. However, a brief summary on why they are not included in Chapter 3 is provided based upon input received during scoping:

Wilderness

Actions proposed are in compliance with wilderness designations and the Wilderness Act of 1964 (establishing John Muir and Ansel Adams Wildernesses), Wilderness Act of 1976 (establishing Kaiser Wilderness) and the California Wilderness Act of 1984 (establishing the Dinkey Lakes Wilderness and additional acreage to the Ansel Adams and John Muir Wildernesses and established a 600 foot corridor adjacent to the John Muir Wilderness for a primitive road [Dusy Ershim]). These resources are not affected by the proposed action or the alternatives. Motorized activity continues to be prohibited in designated wilderness under all the alternatives.

Water Quality Management for Forest Lands in California (September 2000)

This document provides guidance for protecting water quality as directed by the Lahontan Regional Water Quality Control Board (LRWQBC) and Central Valley Regional Water Quality Control Board (CVRWQB) (USDA-FS 2000).

Best Management Practices (BMPs) are the practices, procedures and program that are in conformance with and comply with the provisions and requirements of Sections 208 and 319 of the Federal Clean Water Act (PL 92-500) and the United States Environmental Protection Agency (EPA) guidance for the Coastal Zone Act Reauthorization Amendment. They are also within the guidelines of the Water Quality Control Board (Basin Plans) developed by the nine RWQCB in the State.

Pursuant to Section 208 of the Clean Water Act, all agencies responsible for carrying out any portion of a State Water Quality Management Plan must be designated as a Water Quality Management Agency (WQMA). Through the execution of a formal Management Agency Agreement (MAA) with the Forest Service in 1981, the California State Water Quality Control Board (SWOCB) has designated the Forest Service as the WQMA for NFS lands in California.